THE

HORTICULTURAL REGISTER,

AND

GARDENER'S MAGAZINE.

SEPTEMBER 1, 1837.

ART I.—*Fruit and Fruit Trees.* Introductory Remarks.

MOST fruit is in a great degree nutritious; the best kinds are a pleasing luxury, and the greater part, when ripe and in a perfect state, and used with moderation, are not only inoffensive, but beneficial to health.

The art of growing and propagating fruit trees and good fruit, will be found to be plain, simple, and easy when rightly understood, and in no wise difficult to attain; but it has not received the attention it deserves, and consequently fruit trees consist, in a great measure, of casual growth, or such as are the result of careless, unskilful management, and are either stunted, or diseased, or both, and bear fruit which is unsound or inferior in quality, and the wood is of little value for timber or fire wood.

Trees, when stunted from the seed or afterwards, can rarely be restored to that vigor of growth which they have lost; and when kept too long in nurseries in a crowded state, which prevents their growing, they become too old to transplant, and either die in the operation, or continue dwarfs ever after.

Trees are frequently grafted and budded, not only when stunted or diseased, but when too large and old, and a great number of grafts stuck all over the trees without regard to being placed in the leading and best placed limbs. The grafts may safely, as is the practice, be *warranted*, as they will live; but the natural stock will continue to form the bulk of the top and bearing branches, and the

graft will reman diminutive and bear fruit in proportion. Twenty-five grafts well placed are better than 100 placed at random :—ten grafts judiciously placed in a tree of moderate size, will change the whole top in a few years ; where 200 grafts scattered all over a large tree, will not materially change its top or its fruit.

No person can, therefore, expect to reap any advantage from grafting, unless on small and middle sized trees, and such as are sound and vigorous : all others should be cut down as cumberers of the ground.

Pruning and training are much neglected, or very unskilfully done—making trees of uncouth shape and condition. Trees, when hollow, are in a rapid state of decline ; they will soon rot down. They are made so, in most cases, by pruning off limbs and branches, leaving stumps on the trees ; these rot off, leaving a hole in the tree, which admits water and soon rots and renders it hollow. Haggling off limbs with an axe has the same tendency. Pruning should always be done by cutting or sawing off limbs or branches *smooth* and *even* with the trunk or main branch from which it is taken. The wound will then soon heal over and be covered with bark, which is prevented by stumps or snags being left, as the bark cannot grow over dry snags.

Success in growing and propagating fruit trees depends, like every other branch of business, on practical skill, *how to do it*, and industry and perseverence in the performance. When you plant an orchard, or single tree, plant sound, vigorous young trees, and no other than those you *know* to be such, either by having raised them yourself, or, if procured from a nursery, on such person's representations and assurances as you can safely rely. If you are the owner of trees bearing common or inferior fruit, save, in general, none but the sound, small and middle sized, which graft with the best kinds of fruit. Regulate all by pruning so as to form full, neat tops, suitably open to light and air ; keep the earth around, and as far as the roots extend, mellow and suitably rich ; secure them well by staking or boxing ; water them a little in droughts, until they have taken root.

Having thus given a a general view and outline of the subject, I shall now proceed in detail to describe the method of producing sound, hardy, durable trees, and good healthy fruit, and of making the business successful, agreeable and profitable.

On the growth and propagation of Fruit Trees, Shrubs and Vines.

These may be propagated, 1. *By grafting;* 2. *By budding or inoculation;* 3. *By cuttings and layers; and* 4. *From seed.*

SEASON FOR EACH.

Grafting must be done in the spring, and may be performed as early as the middle of March, and as late as the first of June.

Budding may also be performed in the spring after the bark peels freely, with buds of the previous season's growth, or in summer and autumn after the buds of the same season have attained their growth, which is preferable.

Trees, cuttings and layers must be planted in the fall after frosts and before the ground is frozen, or in the spring after the frost is out and before vegetation has advanced much, which is also a proper time for pruning.

Seed should be planted so late in the fall as not to vegetate but little, if any, or so early in the spring as to have the advantage of the whole season to grow and ripen in, to withstand the winter frosts.

GRAFTING AND BUDDING IN GENERAL.

Grafting may be performed on most kinds of trees on large or small stocks. Different methods of grafting should be used according to the size of the stock. It may be done in any manner by which the scions and stocks can be united. Those methods most in use will be noticed. Budding will only succeed on small stocks of *vigorous growth*, from the size of a yearling shoot to half an inch, and not exceeding about threefourths of an inch in diameter.

The apple and pear succeed well either by grafting or budding.

The peach, apricot and nectarine seldom fail when budded, but rarely succeed by grafting.

The plum and cherry take without difficulty by whip grafting, which is the best method to propagate them; they may also be propagated with tolerable success by budding (the plum more readily than the cherry,) and likewise by cleft grafting, when you succeed in splitting the stick without splintering the wood or injuring the bark, which can seldom be done.

Grafting and budding, for the most part, can only be practised with success on stocks of the same kind with the bud or scion. That is to say, the apple on apple stocks, pear on the pear, the cher-

ry on the cherry, &c. Peaches, apricots and nectarines may be propagated on each other, and together on the same tree. The *apricot succeeds well on the plum*, and is more durable than on the stock of its own kind, or on the peach or nectarine, but not of so quick growth. The peach and nectarine may also be propagated on the plum, but will outgrow the stock unless a plum stock be used growing equally or nearly as fast. Trees of the common small black and red cherry, make excellent and perhaps the most durable stock for cherries of all kinds. The quince and the pear may be grafted on a thorn stock, &c.

GRAFTING.

Scions for grafts may be cut at any time in winter, and even late in the fall. The *proper time* is in February or March, before or at the time the buds begin to swell or vegetate; buds, in this respect, are like kernels of grain, if disturbed when they swell and sprout, they become of slender and sickly growth, and rarely recover their natural vigor. Cut for grafts shoots of the last spring's growth with a little of the two year's old wood. Take your grafts from fruitful trees, bearing good fruit of the kind; that is, if from a pippin tree, let it be from such as bear the best of pippins. The best grafts are those about the size of a pipe stem, taken from bearing branches, and not of side shoots or suckers, nor of the rank growth of the top of trees; these are apt to continue their rank growth, and outgrow the stock, and are not so soon in bearing, nor so fruitful; if too slender they will not be thrifty, nor take well. Tie up the grafts of each kind by themselves, with some distinguishing mark; put them in a cellar or out house, to keep them from being saturated, or dried up, or frost bitten; set in a box of earth onethird their length, the earth kept moderately moist by occasional sprinkling, to keep them plump and prevent their shrivelling, but not so wet as to cause them to sprout.

Scions may be used for grafting, fresh gathered, at any time during the season of grafting before the buds open to leaf; early gathered grafts will, however, take more readily.

Take eight ounces of *pure, transparent rosin, free from sediment*, about two or three ounces of bees wax, and lard of half the size of a hen's egg, melt them over coals or a slow fire, stirring the composition with a stick; after thoroughly mixed and melted, empty it in-

to a pail of cold water, rub some lard over your hands to prevent its sticking to them, and work it together thoroughly, as shoemakers do their wax. If the composition is too hard and does not work freely when making or while using it in grafting, rub over it more lard and work it in as before; if too soft add rosin, and so on until it becomes suitable for use.

CLEFT GRAFTING.

Cut down all diseased and stunted trees, and graft those only which are healthy and thrifty, of not exceeding six or eight inches in diameter, in some of the leading, best placed and thriftiest branches on the tree, with a view to changing the whole top. Trees of a large size may be grafted, and partially, and in some cases wholly changed, but not generally, without a great deal of labor and attention. Saw off the branches for stocks to graft on, at smooth places where they split well, and are in diameter of from one to two inches, prune the tree sufficiently to give room and air to the grafts, and gradually to force the juices of the whole tree into the grafts. Continue pruning each tree yearly, at any leisure time in the winter or spring, giving sap and air, and making room for the grafts as they grow, in such manner that if the grafts are of vigorous growth, in the third season to have cut out all except the grafts, and formed a new top. When limbs are taken off in pruning, it should be done with a saw or chisel, not an axe, and if large limbs a coat of tar, paint or the composition mentioned, put over the wound.

Having the stocks prepared as above, and being furnished with grafts and the composition, with a case knife or other convenient instrument and hammer, split the stock in the middle, drive in a wedge of hard wood or iron of six or eight inches in length, and open the split so as to admit the graft freely, prepare the grafts, either all for the same tree, or one by one as used, by paring off about an inch and a quarter of the end of the graft or scion to the shape of a wedge, leave that side of the graft which is to be put towards the centre of the stock of *equal* thickness with that part which is to be towards the outside of the stock, with a view that the pressure of the stock, when closing upon the graft, be on the *inside* and not on the outside of the graft, where it is intended to unite with the stock; the outside if a little open, will facilitate the communication of the sap from the stock to the graft; but if closed

up tight, may prevent such communication and endanger the graft; insert the graft as far as cut in wedge form, matching the *wood* of the graft and wood of the stock without regard to the outside or surface of the bark on either; take out the wedge with sufficient care not to disturb or displace the graft. To stocks a little over an inch in diameter, one graft is sufficient, if larger, two are necessary, leaving on every graft from two to four buds. Finish the work by covering the crown of the stocks and the splits on each side, whether containing a graft or not, with the composition about the thickness of wrapping paper, by drawing it into strings over them, and smoothing it down lightly with your finger or thumb, covering the whole perfectly tight, to exclude air and rain, and more especially to prevent the sap from running out. The sap being confined, will force its way to the graft, which will readily receive it.

Stocks with only one graft will be improved, by having the corner opposite the graft pared down to about the middle of the graft. It will enable them to heal over sooner, without leaving defects.

If the stock split uneven, cut it a little to fit the graft. If the bark splits from one side of the stock and adhere to the other, cut it down even with the wood, and match the graft to that side only, in case the other is too badly injured.

The grafts should be examined occasionally, and the shoots from the stocks ought not to be suffered to acquire a luxuriant growth, but *gradually* thinned out and cut away as the graft acquires growth and strength to take the juices of the stock.

Let the limbs or stock for grafting be cut off, when convenient, above and near small branches or shoots, to be left at first to draw the sap.

If the above directions are substantially adhered to, few grafts will fail; and a middle sized tree of vigorous growth, may have the top changed, and in a fruit bearing state, in about three years.

WHIP GRAFTING.

This method is particularly calculated for nurseries, and is most expeditious and advantageous on all kinds of young trees, (except the peach, apricot and nectarine, on which budding may be considered, *at all times*, preferable) and is peculiarly adapted to the cherry and plum, and all such as do not split well. It may be performed near the ground, or at the height of five or six feet, near

where you intend to form the top, or in limbs from the thickness of a pipe-stem to about threefourths of an inch, and too small to cleft graft; and the top of young trees having such limbs, may have their top changed by this method, as large trees by cleft grafting; and if the tree have some large limbs to cleft graft, but not many it may be partly cleft and partly whip grafted. The manner is this: provide yourself with the composition before mentioned, soft woollen yarn, and a sharp penknife; begin the work by cutting off the head of the stock, at some smooth part, by one clean slanting cut upwards, so as to form a slope on one side about an inch and a half or two inches in length, and make a small slit from near the middle downwards, to receive the tongue of the scion; then prepare the scion, by cutting it with three or four buds, preferring the lower or thick part, and cutting the lower end on one side also in a sloping manner, the length of and to fit the slope of the stock, as if cut from the same place, that the rinds of both may join, as nearly as possible, in every part; then make a slit upwards in the slope of the scion, so as to form a sort of tongue, to fit that made in the slope of the stock, which insert therein, so that the rinds of both may join together, or on one side, if the stock is larger than the graft; then bind the ports together with the woolen yarn, bringing it round the stock and graft moderately tight, and fastened accordingly; make a plaster of the composition between your fingers and thumbs, and wrap it round the stock and graft over the ligature, squeeze it in your hand, so as to make it snug and tight, to keep the sap and exclude the rain and air, particularly at the ends.—When the buds on the grafts have grown four or five inches, which will be about the middle of June or earlier or later, according to the season, the ligature becomes too tight, and will endanger the grafts;—place the point of a knife on the upper side of the bandage or plaster, press it down through the composition and threads so as to cut them all in two, and take off the bandage and plaster entire. If the stock is large, and the graft is matched and united only on one side, leaving the other side exposed, put the plaster taken off, or a little composition, over the exposed part.—*Poughkeepsie Journal.*

Art. II.—*The Fig Tree.*

The fig tree is evidently a native of that part of Asia, where the garden of Eden is generally said to have been situated, as it is the only tree particularly named in those passages of the Bible, which relate to the creation and fall of man. '*And they sowed fig leaves together and made themselves aprons.*' It is a fruit that appears to have been highly esteemed by the Israelites, who brought figs out of the land of Canaan, when they were sent by Moses to ascertain the produce of that country.

The fig tree is often mentioned both in the Old and the New Testament, in a manner to induce us to conclude that it formed a principal part of the food of the Syrian nation. In the twentyfifth chapter of the first book of Samuel, we read, that when Abigail went to meet David, to appease him for the affront given by Nabal her husband, she took with her, among other provisions, a present of two hundred cakes of figs.

When Lycurgus banished luxury from Sparta, and obliged the Spartan men to dine in one common hall, to enforce the practice of temperance and sobriety, every one was obliged to send thither his provisions monthly, which consisted of about one bushel of flour, eight measures of wine, five pounds of cheese, and two pounds and a half of figs.

The Athenians were so choice of their figs, that it was forbidden to export them out of Attica. Those who gave information of this fruit being sold contrary to law, were called *sykophantai*, from two Greek words signifying the discoverers of figs; and as they sometimes gave malicious information, the term was afterwards applied to all informers, parasites, liars, flatterers, imposters, &c., from whence the word *sycophant* is derived.

The story of Romulus and Remus being suckled by a wolf under a fig tree, proves that this fruit must have been early known in Italy.

The Egyptians and Greeks held this fruit in great estimation; it was their custom to carry a basket of figs next to the vessel of wine used in the *Dionysia*, or festivals in honor of Bacchus; and it is related to have been the favorite fruit of Cleopatra, who was the most luxurious queen the world ever produced. The asp with

which she terminated her life, was conveyed to her in a basket of figs.

Saturn, one of the Roman deities, was represented crowned with new figs; he being supposed to have first taught the use of agriculture in Italy. There was a temple in Rome dedicated to this god, before which grew a large fig tree. The vestals, when they removed this tree in order to build a chapel on the spot, offered a propitiatory sacrifice; this happened about 268 years after the foundation of the city.

The fig was a fruit much admired by the Romans, who brought it from most of the countries they conquered, and had so increased the varieties in Italy, by the commencement of the christian era, that Pliny has furnished us with a description of twentynine sorts that were familiar to him. He says, 'figs are restorative, and the best food that can be taken by those who are brought low by long sickness and are on the recovery.' He adds, 'that figs increase the strength of young people, preserve the elderly in better health and make them look younger and with fewer wrinkles. They are so nutritive as to cause corpulency and strength; for this cause,' continues he, 'professed wrestlers and champions were in times past fed with figs.' This naturalist mentions the African figs as being admired; but says, 'it is not long since they began to grow figs in Africa.' These appear to have been of an early kind; for we find when Cato wished to stimulate the senators to declare war against Carthage, he took an early African fig in his hand, and then addressing the assembly, he said, 'I would demand of you how long it is since this fig was gathered from the tree?' and when they all agreed that it was freshly gathered, 'Yes,' answered Cato, 'it is not yet three days since this fig was gathered at Carthage; and by it, see how near to the walls of our city we have a mortal enemy.' With this argument he prevailed upon them to begin the third Punic war, in which Carthage, that had so long been a rival to Rome, was utterly destroyed. 'The Lydian figs,' says Pliny 'are of a reddish purple color; the Rhodian, of a blackish hue; as is the Triburtine, which ripens before others. The white figs were from Herculaneum, Albicerate and Aratian; the Chelidonian figs are the latest, and ripen against the winter; some bear twice a year, and some of the Chalcidian kind bear three times a year.' The Romans had figs from Chalcis and Chios, and many of their varieties, it appears

were named from those who first introduced or cultivated them in Italy. The Livian fig was so named after Livia, wife to the emperor Augustus, who, it is said, made an unnatural use of it to poison her husband.

The fig tree is a low shrub naturalized in Italy and the south of France, and enduring the open air in the mildest parts of Britain and the United States. This tree in France and Italy, grows as large as our apple trees, but in England and this country seldom exceeds two yards in height; the trunk is about the thickness of a human arm; the wood is porous and spongy; the bark ash colored; the branches smooth with oblong white dots; the leaves annual in the temperate zones, but perennial within the tropics, cordate, ovate, three or five lobed, thick and the size of the hand. The fruit is a berry, turbinate, and hollow within; produced chiefly on the upper part of the shoots of the former year, in the axils of the leaves, on small, round peduncles. The flowers are produced within the fruit; what is considered as the fruit being a common calyx receptacle; the male flowers are few, and inserted near the opening, in the extremity of the receptacle, or fruit; the female flowers are very numerous, and fill the rest of the hollow space within. The greater part prove abortive, both with and without the process of *caprification*. The fig tree is distinguished from all other trees, with which we are acquainted, by its bearing two successive and distinct crops of fruit in the same year, each crop being produced on a distinct set of shoots; but this climate rarely allows the second crop to come to maturity, except where they are forced by hot house culture.

The *caprification* of figs was practised by the ancients in the same manner as it is now attended to by the inhabitants of the Archipelago; and it is described by Theophrastus, Plutarch, Pliny and other authors of antiquity. It is too curious a circumstance in the history of the fig tree to be omitted, as it furnishes a convincing proof of the reality of the sexes of plants. In the cultivated fig, the receptacles are found to contain only female flowers, that are fecundated by means of a kind of gnat *(culex L.,)* bred in the fruit of the wild fig trees, which pierces that of the cultivated, in order to deposit its eggs within, at the same time diffusing within the receptacle the farina of the male flowers; without this operation, the fruit may ripen, but no effective seeds are produced. Hence it is,

that we can raise no fig trees from the fruit of our gardens, having no wild figs to assist the seed. They are consequently raised by cuttings, layers, suckers, roots, and by ingrafting; the most general method is by layers or cuttings which come into bearing the second and even the first year.

In many parts of the Grecian Islands, the inhabitants pay such attention to the caprification of the cultivated figs, that they attend daily for three months in the year to gather these little flies from the wild fig trees in their gardens, by which means they not only get finer fruit, but from ten to twelve times the quantity; thus one of the most minute insects is, by the attention of man, made a principal cultivator of fruit.

It is a curious fact, that freshly killed venison, or any other animal food, being hung up in a fig tree for a single night, will become as tender, and as ready for dressing, as if kept for many days or weeks, in the common manner. We are told of a gentleman, who made the experiment of suspending a haunch of venison which had lately been killed, in a fig tree when it was in full foliage, at about ten o'clock in the evening, and was removed in the morning before sunrise, when it was found in a perfect state for cooking; and he adds, that in a few hours more, it would have been in a state of putrefaction.

We import the best dried figs from Turkey, Italy, Spain and Provence. In the south of France, they are prepared by dipping them in scalding hot lie, made of the ashes of the fig tree, and then dried in the sun.

The most suitable kind to raise in Great Britain or the northern parts of the United States, is the Brunswick fig, (*Ficus indica.*) In a south east corner, trained against a wall, it ripens in England by the middle of August, and about a month later in New England. It is necessary, however, in this country, to secure it from the frosts during the winter, and to remove it as early in the spring as the season will admit. The leaves are very deeply five lobed, the lobes narrow, and of nearly equal width. The fruit is very large, obovate, fleshy, with an unusually oblique apex. The eye is rather depressed. The stalk short and thick. The skin pale green on the shaded side with a tinge of yellow; next the sun, dull, brownish red, sprinkled with small, pale brown specks. The flesh is pinkish in the interior, nearly white towards the skin, but chiefly

semi-transparent reddish brown, extremely rich, sweet and highly flavored.

The fig is cultivated in Great Britain, and in this country entirely for the dessert, but in fig countries, it is eaten green or dried, fried or stewed, and in various ways, with, or without bread or meat, as food. Abroad the fig is introduced during dinner, as well as at the dessert. In common with the melon, it is presented after soup; and the person who cuts a fig, holds it by the small end, takes a thin circular slice off the large end, and then peels down the thick skin of the fruit in flakes, making a single *bonne bouche* of the soft interior part.

For medical purposes, figs are chiefly used in emollient cataplasms, and pectorial decoctions.

The wood of the fig tree is of a spongy texture, and, when charged with oil and emery, is much used in France by locksmiths, gunsmiths and other artificers in iron and steel, to polish their work. This wood is considered almost indestructible, and on that account was formerly used in Egypt and other Eastern countries, for embalming bodies. The milky sap of this tree may be used as rennet, and for destroying warts.

We shall conclude our account of the fig tree, by the well known story of Timon of Athens, who was called *Misanthrope*, for his aversion to mankind and to all society. He once went into the public place, where his appearance as an orator, soon collected a large assembly, when he addressed his countrymen by informing them that he had a fig tree in his garden, on which many of the citizens had ended their lives with a halter; and that, as he was going to cut it down, he advised all those who were inclined to leave the world to hasten to his garden and hang themselves.

ART. III.—*On rendering Pear Trees and other Fruit Trees fruitful, by operating on the Borders, and by Natural Training.* By Mr ROBERT HIVER.

THERE are few subjects in horticulture which can be more acceptable to your readers than a system by which good crops of fruit may be obtained from pear trees planted against the east and west

walls in gentlemen's gardens; the bad crops these trees have afforded have been proverbial ever since I can remember; and the unnatural schemes which are now resorted to, such as strangulation, ringing, depressing of the branches, and reverse-grafting, show that a good system of cultivation is not yet established. This failure has generally been imputed by gardeners to the climate; but as the trees are seldom without fruit at the extremity of the branches, the supposition may be considered erroneous.

It is about twenty years ago since I noticed a brown Beurrée pear tree, trained against the east front of a farmer's cottage. This tree grew upon a limestone rock, where there was very little earth, yet it never failed to yield, yearly, plenty of large and well-flavored fruit. From what I observed of this tree, it appeared evident that the rich and deep border, usually prepared by gardeners, was decidedly wrong, as the plants in this case generated too much sap, which always induces disease and barrenness; and, I believe, it will be found in the tree, as in the human constitution, that the state of health consists in the medium between emptiness and repletion. Sir H. Davy has shown the utility of stones in agricultural crops; and I have found them exceedingly beneficial in the formation of fruit-tree borders; they prevent the accumulation of water in very wet weather, and also retain sufficient moisture for the purposes of the plant in dry seasons. In 1813, I replanted an old pear wall, 240 ft. long: the border for these trees was 12 ft. wide, and only 26 in. deep, 8 in. of which were filled with stones, such as could be most readily procured in the neighborhood, and the remaining 18 with the mould which composed the old border.

By this scanty supply of earth for the roots of these plants I have succeeded in obtaining a fruitful and healthy growth, equally remote from debility and luxuriance; and by this simple process I procure fruit all over the tree, as regularly as if it had been mechanically placed, both plentifully up the main stem, and on the lowest horizontal branches. My trees are fan-trained in the best manner; the shoots are kept as uniform and straight as the plications of the instrument from whence the term is derived, and, when the fruit is full-grown, exhibit one of the most interesting scenes to be met with within the confines of a garden.

With regard to pruning, the knife should be used as sparingly as possible; I conceive it to be as injurious to this tribe of fruit trees,

as the lancet is to animal life; it creates those inconveniences which it is employed to remove: whoever indulges in its free use, most certainly defeats his own purpose. Let any man who is inclined to dissent from this opinion, consider the common thorn confined in a hedge, where it annually undergoes the operation of clipping, and the shrub in its primitive growth, and he will want no arguments to convince him of the impropriety of the practice. But my plants require very little assistance from the knife: they make no breast-wood, the energies of the tree being chiefly engaged in forming blossom-buds for the future crop.

It may be justly inferred, from what is here stated, that the bad success which most gardeners have experienced in the cultivation of this valuable fruit, arises principally from the luxuriant state of their trees; the limited space which they occupy on the wall is so disproportionate to their natural growth, that it is almost impossible, with deep and highly manured borders, to reclaim them from a habit of plethorical sterility. The farina, and the whole fructification, partake of this unhealthy condition; and it may be observed, that fruits fecundated with bad pollen scarcely ever resist the atmospheric changes which they afterwards encounter.

From observations made in vegetable physiology, I am persuaded that the tree is principally the produce of the earth, and the fruit of the atmosphere; a great diminution of vigor may take place in the one, without any perceptible alteration in the other. It is, therefore, the first object of the cultivator to proportion the supply of nutriment to the extent of his tree, and this will be best effected by the shallow border above described.

These are the remarks of a man long devoted to the difficulties of his profession, such as have been suggested by nature, and confirmed by experience; and if they are found to be sufficiently instructive for the pages of your useful miscellany, I shall feel happy in being numbered amongst your many correspondents.—*Naturalist.*

Art. IV.—*Plants Recently Figured and Described in Foreign Works.*

Peristeria *Cerina—(Waxen Dove flower.)* A new species of the curious genus Peristeria, imported from the Spanish Main by Mr Knight of the King's-road, in whose nursery the accompanying figure was made in June last.

It is allied to the *P. pendula* of the Botanical Magazine, from which it differs in its spotless, smaller flowers, in the crisped border of the middle lobe of the labellum, and especially in the absence of wings from the column. This latter circumstance brings the genus *Peristeria* extremely near *Maxillaria Warreana* on the one hand, and *Maxillaria cristata* on the other.

The flowers have a strong smell of Juniper.—*Botanical Register.*

Lophospermum scandens—(*Climbing Lophosper.*) Description of the species, *Lophospermum scandens.* This is an extremely handsome herbaceous climbing plant. Branches cylindrical, copiously clothed with soft viscid jointed hairs. Leaves alternate, numerous, petiolate, cordate, acuminate, inciso-serrated, rough, 5-nerved, from 3 to 4 inches long, and 2 to 3 broad. Petioles roundish, villose, 2 inches long. Flowers pendulous. Peduncles axillary, solitary, one-flowered, round, villose, without bracts, nearly twice as long as the petioles, turned together with the leaves to one side of the stem. Calyx rough, deeply 5-parted: the segments ovate, acuminate, entire, or here and there exhibiting a slight tooth, the two exterior broader than the others. Corolla large, showy, campanulate, pink inclining to purple, twice as long as the calyx, tubular at the base, dilated at the throat, limb 5-lobed, nearly equal, lobes broad, rounded at the top, with imbricated æstivation. Stamens 4, didynamous, fertile, inserted on the lower part of the tube, a little shorter than the corolla. Filaments linear, compressed, glandulose at the upper part. Anthers two-lobed, two-celled, not pointed, naked. Ovary globose, two-celled. Style very long, slender, filiform, smooth, thicker below. Stigma simple, emarginate. Capsule spherical crowned by the persistent base of the style, two-celled, nearly two-valved, splitting irregularly. Seeds numerous, imbricated, ascending, compressed, surrounded by a membranous or scarious, irregular margined border, truncate at the top, and having at the base a depressed hilum.

Popular and Geographical Notice. This truly magnificent plant, as professor Don justly terms it, was first made known to Europeans as a native of Mexico by Sesse and Mocinno, whose specimens are still preserved in the herbarium of Mr Lambert. The species here figured is the genuine scandens, as professor Don has been so obliging as to determine for us; that which commonly passes for such being the Lophospermum erubescens. Both are climbing plants, and desirable subjects for cultivation, possessing the great advantage of unfolding a succession of flowers for some months. This depends upon the progressive development of the main stem and branches throughout the summer and autumn months, whilst the flowers being axillary are also continually produced as the new leaves are formed. The same habit is seen in the Maurandia, a genus very closely allied to Lophospermum.

Introduction; where grown; Culture. Although this plant was made known by Professer Don, from dried specimens in the Lambertian herbarium, it is to William Bates, Esq., that we are indebted for the introduction of its living roots to this country. Mr Bates found it growing very generally over bushes, making a splendid appearance in the valley of Mexico. Here he observed other species also, and amongst them one with pure white flowers. Our present plant first flowered in the collection of Charles Tayleure, Esq., of Toxteth-park, who presented it to the Liverpool Botanic Garden From the rich collection of this most important establishment specimens were liberally handed to Mrs E. Bury, of Everton, to whose kindness and talent we are indebted for the present correct delineation.

Mr Shepherd, the Curator, informs us that its root is thick and fleshy, not unlike those of the Dahlia. He further states that he planted it last spring, (1836,) against a south wall, to which it was trained. Here it grew as luxuriantly as the Lophospermum erubescens. In the autumn the root was covered over with dry peat earth, to the depth of about eight inches; and on examining it in the present month of April, he found it perfectly sound, and beginning to grow.—*Botanist.*

Leptosiphon Androsaceus—(*Androsace-like Leptosiphon.*) The name of the genus now before us is derived from the Greek words Leptos, slender; and Siphon, a tube. Its application is evident.

This is a very pretty newly-introduced annual, of humble growth,

varying in the color of its flowers, from white to pale pink or purple. It is a valuable little plant for flowering early in the summer from autumn-sown seeds. The past winter has been severe, and most unfavorable to tender plants, notwithstanding which we have healthy seedlings of it, growing in an exposed situation, from seeds which had been shed from a flowering plant last autumn. This may be considered as ample proof of its power to withstand any vicissitudes of winter; but the heat of summer, in a dry soil, is not very congenial to its luxuriance, therefore a rather shady situation should be chosen for spring-sown plants, which are intended to flower in August.

The physiologist may be recommended to examine the leaves of this plant, which are deeply divided into segments, always consisting of an even number, as four, six, eight, &c.—*Botanic Garden.*

Platystigma Lineare—(*Linear-leaved Platystigma.*) One of the prettiest of all little annuals, with its graceful cups of white and yellow, resembling those of a ranunculus, but far more gay.

It is a native of California, where it was originally found by Douglas, who however sent home no seed. More recently it has been received at St. Petersburgh from the Russian settlements in California, and thence it has found its way to England. I fear, however, our damp summers will prevent its ripening seed with any certainty.—*Botanical Register.*

Gardenia Pannea—(*Cloth-leaved Gardenia.*) A handsome stove shrub, native of the tropical parts of South America, whence it was received some years since by the Horticultural Society.

It flowers in June and July; but like a large number of the woody inhabitants of the tropics, seldom produces its blossoms in this country. The drawing was made three or four years since. The dull wrinkled foliage is by no means handsome, and as the flowers are destitute of smell, they have nothing to recommend them beyond their size and curious color.—*Botanical Register.*

Echeveria Racemosa—(*Racemed Echeveria.*) Four species of this handsome genus are described by De Candolle, all natives of Mexico or California, and a fifth (Mexican one) is described by Haworth: from all these our plant differs in the inflorescence, and still more in the foliage. The Glasgow garden has received it from the Berlin garden, but without a name, and from that of Claremont under the appellation here adopted. Of its history, I regret to say

I know nothing: it is probably a native of Mexico. The flowers are produced copiously in the green house in the summer and autumn months.

Description.—Succulent, suffrutricose. Barren stems short, thickly clothed with rosulate tufts of fleshy leaves, of a brownish green color and glaucous hue, two to four inches long, in form between lanceolate and linguiform, slightly concave above, convex and keeled beneath, the margin white and cartilaginous: flowering stems nearly a foot high, rounded, glaucous, sparingly leafy, with leaves of the same shape as those of the barren stems, but narrower and gradually becoming smaller. Raceme elongated, many-flowered. Pedicels curved. Calyx 5-partite, fleshy, glaucous, the segments ovato-lanceolate, very sharp-pointed. Corolla red, of five, erect, carinated petals, gibbous at the base, and there united so as to appear monopetalous. Stamens ten, five at the base of the petals, and alternate with them, five shorter ones inserted a little above the middle of the petals. Hypogynous glands five, small, white, fleshy, one at the base of each germen. Pistils five, standing close, erect: Germen ovate, tapering into a rather short, slender style: Stigma obtuse.—*Botanical Magazine.*

Fuchsia Globosa, var. *Elegans*—(*Elegant globe-flowered Fuchsia.*) The species of which our present subject is a variety, has—since it was made known by Mr. Bunny, who raised it from seeds of the *F. conica*,—been a great favorite in our gardens; and certainly its pretty growth, the brilliant scarlet color, and globose figure of the flower, stamp it with much interest and beauty, which render it highly worthy of the place it enjoys.

Beautiful as are many of the varieties that have sprung from this and other species of the genus *Fuchsia*, there is not one, with which we profess an acquaintance, more handsome than that now figured: the flowers are large, of the most brilliant colors, and the general habit of the plant is bold and elegant.

It was raised by Mr. Silverlock, in his nursery at Chichester, where from a fine flowering plant the accompanying faithful representation was delineated by Miss Foley, and by Mr. S. kindly communicated to us. Although Mr. S. is certain of its being raised from seeds produced by *F. globosa*, yet he cannot positively say by what species the flowers became fertilized, as so many crosses were

made about the same time, but of its being a fixed variety there is no doubt.

It may be cultivated without much difficulty in any rich soil. No plants contribute more to the gaiety or elegance of our flower gardens than those belonging to the genus *Fuchsia*, and there is perhaps no better way of showing their rich pendent flowers to advantage than by grouping them, not over thick, in a bed of rich soil, in which they grow strong, and produce a great profusion of large blossoms. We have seen them present a very striking and interesting appearance when trained upon neat trellis work against a wall.

The generic name was given in honor of Leoner Fuchs, a German botanist, author of "Historia Stirpum."—*Paxon's Mag. of Bot.*

Art. V.—*Of the Analysis of Soils, and of the Agricultural Relations between Soils amd Plants.*

We have seen that the earths have a threefold capacity: that they receive and lodge the roots of plants and support their stems; that they absorb and hold air, water and mucilage—aliments necessary to vegetable life; and that they even yield a portion of themselves to these aliments. But we have also seen, that they are not equally adapted to these offices; that their parts, texture, and qualities are different; that they are cold or warm, wet or dry, porous or compact, barren or productive, in proportion as one or other may predominate in the soil: and that to fit them for discharging the various functions to which they are destined, each must contribute its share, and all be minutely divided and intimately mixed. In this great work nature has performed her part; but as is usual with her, she has wisely and benevolently left something for man to do.

This necessary march of human industry, obviously begins by ascertaining the *nature of the soil.* But neither the touch, nor the eye, however practised or acute can in all cases determine this. *Clay* when wet, is cold and tenacious—a description that belongs also to magnesian earths: *sand* and *gravel* are hard and granular; but so also are some of the modifications of lime; *vegetable mould* is black and friable, but not exclusively so: for schistous and carbonaceous earths have the same properties.

It is here, then, that chemistry offers herself to obviate difficulties, and remove doubts; but neither the apparatus nor the process of this science, are within the reach of all who are interested in the inquiry, and we accordingly subjoin a method, less comprehensive, but more simple, and sufficiently exact for agricultural purposes, and which calls only for two vases, a pair of scales, clean water, and a little sulphuric acid.

"1st. Take a small quantity of earth from different parts of the field, the soil of which you wish to ascertain, mix them well together, and weigh them; put them in an oven, heated for baking bread, and after they are dried, weigh them again; the difference will show the *absorbent power of the earth.* When the loss of weight in 400 grains, amounts to 50, this power is great, and indicates the presence of much animal or vegetable matter; but when it does not exceed 20, the absorbent power is small, and the vegetable matter deficient.*

"2d. Put the dried mass into a vase with one fourth of its own weight of clear water; mix them well together; pour off the dirty water into a second vase, and pour on as much clean water as before; stir the contents, and continue this process until the water poured off is as clear as that poured on the earth. What remains in the first employed vase, is *sand, silicious* or *calcareous.*

"3d. The dirty water, collected in the second, will form a deposit, which (after pouring off the water,) must be dried, weighed, and *calcined.* On weighing it *after* this process, the quantity lost will show the portion of *animal* and *vegetable mould contained in the soil;* and,

"4th. This calcined matter must then be carefully pulverized and weighed, as also the first deposit of sand, but without mixing them. To these, apply (separately,) sulphuric acid, and what they respectively lose in weight, is the portion of *calcareous* or *aluminous earths* contained in them. These last may be separated from the mass by soap lye, which dissolves them." †

Here is the light we wanted. In knowing the disease, we find the cure. Clay and sand qualify each other; either of these will

* See Davy's Elements.

† This method of anayizing soils is that described by M. Bosc, member of the Institute of France, &c., and recommended to French agriculturists.

correct an excess of lime; and magnesian earth, when saturated with *carbonic acid*, becomes fertile.

But entirely to alter the constitution of a soil, whether by mechanical or other means, is a work of time, labor, and expense, and little adapted to the pecuniary circumstances of farmers in general. Fortunately, a remedy, cheaper, more accessible and less difficult, is found in that *great diversity* of habits and character, which mark the vegetable races. We shall, therefore, in what remains of this section, indicate the principal of these, as furnishing the basis of all rational agriculture.

1st. Plants have different systems of roots, stems, and leaves, and adapt themselves according to different kinds of soil. The Tussilago prefers clay; the Spergula, sand; Asparagus will not flourish on a bed of granite; nor Muscus Islandicus on one of alluvion. It is obvious that *fibrous rooted* plants, which occupy only the surface of the earth, can subsist on comparatively stiff and compact soils, in which those of the leguminous and cruciform families would perish, from inability to penetrate and divide.

2d. Plants of the same or of a similar kind, do not follow each other advantageously in the same soil. Every careful obsever must have seen how grasses alternate in meadows or pastures, where nature is left to herself. At one time timothy, at another clover, at a third red top, and at a fourth blue grass, prevails. The same remark applies to forest trees; the original growth of wood is rarely succeeded by a second of the same kind; pine is followed by oak, oak by chestnut, chestnut by hickory. A young apple tree will not live in the place where an old one has died; even the pear tree does not thrive in succession to an apple tree; but stone fruits will follow either with advantage. "In the Gautinois, (says Bosc,) saffron is not resumed but after a lapse of twenty years; and in the Netherlands, flax and colzat require an interval of six years. Peas, when they follow beans, give a lighter crop than when they succeed plants of another family." *

3d. Vegetables, whether of the same family or not, having a similar structure of roots, should not succeed each other. It has been

* The ill effect of a succession of crops of the same kind was not unknown to the Romans. We have proof of this in the following passage of Festus: Restibilis ager fit qui continuo biennio seritur farreo spico, id est aristato, quod, ne fiat *solent, qui pradia locant, excipere.*

observed that trees suffer considerably by the neighborhood of sainfoin and lucern, on account of the great depth to which the roots of these plants penetrate—whereas culmiferous grasses do them no harm.

4th. Annual or biennial trefoils prevent the escape of moisture from sandy and arid soils, and should constantly cover them in the absence of other plants; † while *drying and dividing crops*, as beans, cabbages, chicory, &c. &c., are best fitted to correct the faults of stiff and wet clays.

5th. When plants are cultivated in rows or hills, and the ground between them is thoroughly worked, the earth is kept open, divided, and permeable to air, heat, and water, and accordingly receives from the atmosphere nearly as much alimentary provision as it gives to the plant. This principle is the basis of the drill husbandry.

6th. All plants permitted to go through the phases of vegetation, (and of course to give their seeds,) exhaust the ground, in a greater or less degree; but if cut green, and before seeding, they take little from the principle of fertility.

7th. Plants are exhausters in proportion to the length of time they occupy the soil. Those of the culmiferous kinds (wheat, rye, &c.) do not ripen under ten months, and during this period, forbid the earth from being stirred; while, on the other hand, leguminous plants occupy it but six months, and permit frequent ploughings. This is one reason why culmiferous crops are greater exhausters than leguminous: another is, that the stems of culmiferous become hard and flinty, and their leaves dry and yellow, from the time of flowering till the ripening of the seed—losing their inhaling or absorbing faculties—circulating no juices, and living altogether in their roots, and on aliments exclusively derived from the earth; whereas leguminous or cruciferous plants, as cabbages, turnips, &c. &c., have succulent stems, and broad and porous leaves, and draw their principal nourishment from the atmosphere. The remains of culmiferous crops also are fewer, and less easily decomposed, than those of the leguminous family.

8th. Meadows, natural and artificial, yield the food necessary to cattle, and, in proportion as these are multiplied, manures are increased, and the soil made better. Another circumstance that re-

† The "Sterilis tellus media versatur in æstu," of Virgil, shows the opinion he entertained of a husbandry that left the fields without vegetation.

commends them is, that so long as they last, they exact but little labor, and leave the whole force of the farmer to be directed to his arable grounds.

9th. Grasses are either fibrous or tap-rooted, or both. The remarks already made, in articles 1, 2, and 3, apply also to them. Timothy, red top, oat grass, and rye grass, succeed best, in stiff, wet soils. Sainfoin does well on soils the most bare, mountainous, and arid; lucern and the trefoils, (or clovers,) only attain the perfection of which they are susceptible, in warm, dry, calcareous earth.

10th. The ameliorating quality of tap-rooted plants is supposed to be in proportion to their natural duration; annual clover, (lupinella,) has less of this property than biennial, (Dutch clover,) biennial less than sainfoin, and sainfoin less than lucern.

11th. Any green crop ploughed into the soil, has an effect highly improving, but for this purpose, lupins and buckwheat (cut when in flower) are most proper.

12th. Mixed crops (as indian corn, pumpkins, and peas, and oats) are much and profitably employed, and with less injury to the soil than either corn or oats alone.‡

Art. V.—*On the Natural Succession of Forest Trees in North America.* By J. M., Philadelphia.

In Vol. III. p. 351, an extract is given from Evelyn's letter to Sir John Aubrey, stating that beech trees grew in place of oaks which had been cut down by his grandfather, and that birch succeeded beech which his brother had extirpated. In the United States the spontaneous succession of timber, of a different kind from that cut down, is well known. In the *Memoirs of the Philadelphia Society for promoting Agriculture*, Vol. I., there are several papers on this subject, by the president, the late Richard Peters; by Dr. Mease;

‡ The good effect of these mixtures was known to the ancients, from whom the practice has descended to us. What a picture of fertility and abundance have we in the 22 chap. 18th book of Pliny's Natural History: "Sub vite seritur frumentum, mox legumen, decinde olus, omnia, eodem anno, omniaque aliena umbra aluntur."

by Mr John Adlum, who had long been a surveyor in the new settlements in Pennsylvania; by Dr Caldwell, in reference to the fact in North Carolina, in Massachusetts, and in New Jersey; and a confirmation of it in the last mentioned state, by Mr Thomas F. Leaming. In the third volume, Mr Isaac Wayne, son of the American general the late A. Wayne, also gives some interesting details respecting the appearance of timber trees, of a kind different from those which formerly covered the ground in his vicinity, and which had been cut down by the American army, when encamped there in the autumn and winter of the year 1777, and spring of the following year. One of the above writers refers to the relation of Mr Hearne (*Journey to the Northern Ocean*, p. 452), for the fact of strawberries growing up wild near Churchill river, and in the interior parts of the country, particularly in such places as have been formerly set on fire; and for that of hips and raspberry bushes shooting up in great numbers, in burnt places, where nothing of the kind had ever been seen before. Cartwright is also quoted, in proof of the point. He observes, "that if through carelessness the old spruce woods are burnt, or by lightning, Indian tea first comes up, currants follow, and after them birch." (*Journal of Trans. at Labrador*, Vol. I. p. 225.) Nine years after the publication of this last work, M'Kenzie stated, that "land covered with spruce-pine, and white birch, when laid waste by fire, produced nothing but poplars:"* and yet the Edinburgh reviewer of his work very indelicately declared his disbelief of the relation. Recently, we have additional testimony on this subject. In the manual on the culture of silk, prepared in consequence of a resolution of the house of representatives of the American Congress, and published in the session of 1828, it is stated (p. 38) that "in Tennessee, when a native forest is cut down, if the land be enclosed, a growth of red mulberry trees soon takes place." All these statements do not admit a doubt to be entertained of the natural succession of forest timber; the fact is moreover familiar to every man who has lived in the country, and to almost every intelligent person in North America. I regret that the enterprising voyager did not live to shame the northen critic for his rudeness, and to enjoy the satisfaction of seeing his own testimony of a curious and interesting fact in natural history confirmed by others.—*Gardener's Magazine.*

* Voyage from Montreal to the Frozen and Pacific Oceans. London. 1801.

ART. VI.—*Winds and Storms.* By W. G., Otisco, N. Y.

THE theory of the winds—their general direction and force—the barometrical fluctuations they produce—their effect on the temperature and their general influence on the climate—and the phenomena they present when moving as storms or tornadoes, render their investigation and correct understanding of more than usual interest to the farmer, as well as to the philosophical observer of nature. Meteorology has of late assumed a new aspect, from the researches that have so closely identified it in its various changes with the electro-magnetic agency, and many valuable facts connected with the origin, tendency and movements of the general currents of air have been observed and recorded. It is evident, that to make an approximation to certainty in this matter, a great number of observations, and those too made at the same time, but in different places, are required. The number of individuals who find a pleasure in making observations of this nature scattered over the world—the practice of seamen in placing on their log such meteorological changes—and in the United States the regular observations made and recorded at the various military posts in such widely different climates and latitudes, promise altogether the accumulation of a mass of facts from which correct inferences and deductions may be drawn.

Two theories to account for the phenomena that accompany the gales and tornadoes of the Atlantic, and the coasts and interior of the continent, and illustrate the general action of the currents of the atmosphere, have lately been brought before the public; the first called the rotary theory, by Mr W. C. Redfield, of New York; and the other known as the chimney, or centrifugal one, by Mr Espy, of Philadelphia..

The general theory supported by Mr R. with great ability and research is, that all great storms, those that occasion any considerable variation of the barometer, move with a rotary motion round a given centre, the progression of which centre constitutes the line on which the gale moves, and of course determines the rapidity with which the storm advances. The diameter of these rotary circles varies from a degree to five or six, or from sixty miles to four hundred; and the time taken up by the gale in passing over a given space determines its rapidity and the diameter of the whole. The

manner in which these gales move, and the phenomena they exhibit, may be illustrated by drawing a circle of two or three inches in diameter on paper, passing a line directly through its centre to show the line on which the storm moves, and making two lines parallel to the above, which shall intersect the outline of the circle drawn. It will be seen on looking at such a diagram, that during the passage of a storm with a rotary motion, the wind at the same moment, in different parts of the circle, will be blowing from every point of the compass, and of course with a velocity far exceeding the onward progress of the gale. For instance, we will suppose the course of the gale to be north: it will be seen that, since the storm in advancing invariably turns from east to west, or from right to left, the wind where it passes along the east parallel line will blow strongly but steadily from the south, while that part of the gale that intersects the west parallel line will blow with equal force and velocity from the north. A West India hurricane, that commences almost in a point in the tropical seas, and blowing with irresistible violence there, gradually expands in diameter, and diminishes in intensity, as it sweeps in a great circle over the West Indian Sea and Islands, until it approaches the southern coast of the United States, generally in the neighborhood of Cape Hatteras, whence it is inflected by the coast and ranges of mountains in the interior, till its fury is spent and its course lost off Newfoundland and the Grand Banks. That such is the general course pursued by the tropical hurricanes, is evident from the facts accumulated by Mr R., and from the beautiful chart with which he has in Silliman's Journal illustrated the theory, and traced the course of some ten or twelve of the most violent and best defined gales that have occurred within the last twenty years. Thus if the centre of one of these vast gyratory bodies of air is passing north, say up the valley of the Hudson, the eastern margin at Boston would be a regular southern gale, while in the country of the lakes, or the Genesee, the current of air would be from the north.

That the rotary theory is very satisfactory in its application to those tornadoes or hurricanes which visit the tropical regions, and sometimes appear in this country, must be admitted by all. Tornadoes, wherever they may originate, or whatever may be their course, whether on land or over seas, always seem to act with a rotary motion, and as whirlwinds, possessing a forward as well as gyratory movement, are well understood. The sudden lull, so characteristic

of the tropical hurricane—which must ensue if the rotary system is correct—and the almost instantaneous change which takes place in the direction of the wind, when after the lull it recommences with violence, are precisely what ought to be if the mass of the gale moves in a rapid whirl. When Mr R. first promulgated his theory, and exhibited the facts on which he relied for its support, he was by many understood to include all those general and regular currents of air which, without sensibly affecting the barometer, or only so to a very limited extent, sometimes prevail in one direction for a considerable period, as in our northeastern or southwestern winds, and this long continuance was deemed inconsistent with the rotary theory, and contradictory to the well known facts that must attend such movements. This misapprehension of Mr R.'s principles has been corrected by himself, and such new facts adduced as seem to place the rotary system of storms beyond the reach of doubt.

The theory of Mr Espy supposes, that in a hurricane the wind blows from all points of the compass to a given centre, the forward movement of which point indicates the progress and rapidity of the storm. It is founded on the well known fact, that in an open chimney or large fire, the cooler air rushes from every quarter to supply the vacancy left by the ascending heated air. This theory it is apprehended does not explain the phenomena connected with tornadoes and thunder storms as satisfactorily as does the rotary theory; and when it is remembered that all gales partake more or less of the whirlwind character—that the gyratory movement is generally proportioned in violence to the electrical state of the atmosphere, and that there is clearly in the centre of most tornadoes an upward tendency of the air, which rarely or never exists without a whirling movement, we think the probabilities are altogether in favor of the theory advocated by Mr R. As it is, the difference is hardly worth contending about by men of science, since, should Mr E. admit a rotary movement of the central point to which his currents of air all tend, a fact he can scarcely deny, it is clear there would be but little difference in the ultimate results.

The winds that have the most influence on the climate and general temperature of our country, are those that blow from the northeast, or the southwest; as the first almost invariably reduces the temperature to a great extent, and the last is in most instances the precursor of rains. These currents of air usually continue several

days with more or less violence, and of course are not to be considered as coming within either of the theories above noted. Our northeasters are proverbially obstinate and enduring; and those who have witnessed the twelve or twenty days of rain from that quarter, that usually afflicts this country in May or June, when the weathercocks fairly rust into the Nova Scotia sky—when umbrellas and waterproof overcoats are in great demand, and the farmer's corn rots in the ground and his lambs perish in the field, will need no other evidence of the fact.

That the general course of the winds on this continent is from the northwest, observations long continued in various parts of it fully prove; and every one who has paid attention to meteorology must have noticed, that while the lower strata of clouds have been running from the south or the north, the higher currents of air, and the light clouds floated by them, have still been from the western quarters; indeed, it has not unfreqently occurred that while the wind and weather has been fine at one point, at another, only a few hundred miles distant, the wind may be in a totally different direction, and a severe and long continued gale be at that very time raging. An illustration of this fact occurred on the 4th of March last. At Washington, (it was the day of the inauguration of the new President,) the weather was clear and beautiful—the wind from the west, and the air pure; while across the whole southern extremity of the Union, from Savannah to New Orleans, a cold northeast storm of wind and rain was passing, and what should be particularly remembered is, that it commenced raining at New Orleans at least six hours before it was felt at Savannah.

The great snow storm of October 5th, 1836, will be remembered by most of our readers, and will furnish a good illustration of the manner in which our northeast storms commonly operate. It extended from Quebec to the Gulf of Mexico, and was accompanied by snow nearly the whole distance. For thirtysix hours previous to the fall of snow, the wind had blown steadily and strongly from the north of east, with a current in the interior more deflected to the south, owing probably to the general range of the rivers and mountains. No snow in any part of the United States fell within from 30 to 40 miles of the sea coast; it being rain on the coast, and the line between the rain and snow passing through Concord, Worces-

ter, Middletown, the Highlands, and the first ranges of elevated land through Pennsylvania, Maryland and Virginia. At Macon and Milledgeville in Georgia, the wind was strong from the north, and the depression of temperature was sufficiently indicated by the hard frosts of the 4th, and the cold rains of the 5th and 6th. At Yorktown, in South Carolina, a few flakes of snow were mingled with the rain that commenced falling on the evening of the 4th. That night the Blue Mountains of Virginia, and the Sideling Hills of Maryland, were whitened with several inches of snow. Snow also accompanied the rain that fell at Wheeling on the Ohio river, west of the Allegany ranges, on the afternoon of the 4th. On the 5th, snow fell over most of the northern states, evidently conforming to the rule laid down by Dr. Franklin, that northeast storms begin in the southwest, as it is clear from a comparison of dates, that the rain or snow retrogaded against the wind, or commenced later as they were felt at the north. Thus at Wheeling there was rain and snow in the afternoon, at Yorktown in the evening, in Maryland and Pennsylvania it snowed most of the night, in the interior of New York, near Utica or Onondaga, it did not commence till near morning, the tops of the Green Mountains near Williamstown and Pittsfield were covered early on the morning of the 5th, while, owing to the influence of Lake Ontario, it did not begin to snow at Lockport and Buffalo before about ten o'clock.

The authentic records of this severe and extensive gale, show that at least twelve hours were occupied by the storm in backing against the wind from South Carolina to the St. Lawrence, and its low temperature with its little effect on the barometer, proves that it belonged to a direct moving current of air, and not to either the rotary or centrifugal classes of storms. It is hardly possible that the frosts of Macon, or the snows of Carolina, could have originated from a current of air fresh from the tropical heats, and then first impinging on the American shores; and the probability is still less that it originated from such causes as is by Mr Espy deemed in such cases capable of producing them.

Observations made with some care have convinced us, that the long continued and wide sweeping storms that reach from the Atlantic to the Rocky Mountains, and from the extreme north to South America, whether the current of air sets from the north or the south matters not, so far as regards the principle, and which last from

three to five days, have a different origin, and proceed on different principles, from the hurricanes and tornadoes of the tropics and the Western Atlantic. From an elevation of country near the residence of the writer, a tract of country stretching from near Oswego to the Highlands of Fish Creek, and the sources of the Mohawk, is distinctly visible, embracing an extent of from 50 to 70 miles. Repeated attention to the circumstance has shown, that when a regular "set to" from the southwest has commenced, and been preceded by the usual stiff gale of twenty or thirty hours from the same quarter, it rarely fails of raining or snowing an hour or two on the country north of the Oneida before reaching us, and of course must advance against the wind. The result is directly the reverse when the gale is from the northeast, the rain or snow striking us long before it is felt in the region north of the lakes. To use a common and well understood phrase, the stream of clouds moving with the wind seems to "dam up," and constant accumulation of vapor being made, the current, like a river, is compelled to "set back," until by deposition of moisture, electrical agency, or other causes, equilibrium is restored.—*Genesee Farmer.*

Art. VII.—*Turnep Townsend.*

There are some men in every country weak and wicked enough to sneer at every thing that does not minister to the immediate gratification of the senses, however much it may tend to ameliorate and improve the great mass of mankind, or benefit their condition. In European countries, this class of men are found among the witlings and parasites of courts, where, elated with temporary importance, they look with disdain upon men whose far-reaching but unobtrusive minds are engaged in benefiting their fellow men, instead of devoting themselves to the foolish fashions and luxurious tastes of the day. In this country, the same species of individuals, though perhaps more rarely, are to be found. They are most frequently discovered among the idle and junior classes of the professions—persons whose parents have obtained competence and wealth by labor, mechanical pursuits, manufactures, or trade, and who, having

forgotten the honorable business of their fathers, are disposed to look with contempt on the producing classes. Such a feeling however does not exist in the mind of any well informed man, who is accustomed to view the relation between cause and effect, and who understands the influence which the various parts of the great social superstructure exercise upon each other.

Such was the unworthy feeling that produced the nickname placed at the head of this article. " Turnep Townsend," so called by the court fops of the reign of George the First, was a nobleman of sterling qualities of heart and mind, and who of course was unwilling to devote all his time to the ridiculous and paltry fooleries which engross the attention of so many. Lord Townsend accompanied the king in one of his visits to Germany, and while there was much struck with the fields devoted to the turnep culture in that country, a kind of farming at that time utterly unknown in England. As a food for cattle and sheep, as an enricher of the ground, and as a preparative for grain crops, Townsend saw these roots were unrivalled; and making himself familiar with the processes of culture, on his return introduced the practice among his tenants, both by instruction and example. Entering with spirit into the undertaking, he found his efforts crowned with complete success, and from that date may be traced the introduction and spread of the turnep culture in England.

So devoted was Townsend to his new occupation of agriculture, that whenever his duties would permit, he used to hasten away from court to his farms, to encourage by his presence and directions the improvements he was endeavoring to introduce. Such a man could not be understood by the unfledged wits and fashionable butterflies that shine and flit their short lives in the atmosphere of a court, and as turneps formed the base of his attempted innovations in farming, he acquired the name of " Turnep Townsend," which he retained during his life. " If it was asked," says Colquhoun, in his admirable statistical, commercial and agricultural researches, " who was the man in modern times who had rendered England the most signal service, no one acquainted with facts could hesitate to say, that it was the nobleman whom shallow courtiers nick-named in derision 'Turnep Townsend.' In half a century the turneps spread over the three kingdoms, and their yearly value, at this day, is not inferior to the interest of the national debt." The rapid renovation of

Norfolk, where the turneps were first introduced, was astonishing, lands long considered as utterly worthless, were in a few years covered with heavy wheat, and the present annual value of the turnep in that country alone is estimated at not less than fifteen millions sterling, or more than sixty millions of dollars.—*Genesee Farmer.*

Art. VIII.—*Blight in Pear Trees.*

Messrs Editors,—In your last Register I observed an article copied from the "Farmers' Register," referring to the blight in pear trees. Any one that can discover a remedy for that troublesome disease will deserve the thanks of the whole horticultural world, and the suggestions of any one are entitled to a fair trial. My experience, however, leads me to differ from the conclusions drawn by Mr Watkins, although I do not doubt the facts he has stated.

In the first place, he concludes, from the fact, that two trees standing in his yard, which had never been cultivated, not having been blighted, and that some young trees, having been set out in a cultivated spot were blighted, that cultivation by increasing the sap, causes the blight; and in the second place, that pruning trees has the same effect.

It appears, however, that the yard in which the trees stood was trodden by horses and cattle, and therefore, at least as much if not more manure, reached the roots, as would have done so, had the ground been ploughed or digged. It is too late in the day for any one to oppose cultivation with effect in this country, neither does Mr Watkins. (In the latter part of his communication he recommends that poor land should be made better even at the risk of blight;) but there are many, too many persons in this country who are satisfied with old fashions, and as long as they can raise as much as they want off of ten acres of land, will never try to get the same quantity from five, and feel perfectly satisfied with, and indeed, insist that better cider can be made from the sour natural fruit of the tree, than from the grafted and cultivated. With such men it is no use to argue; but they have children to come after them, and it is the rising generation who will be enlightened.

I insist, that not one half pruning enough is done in this country, and that thousands of trees are ruined by not being pruned properly when young. In many instances the limbs are left too near the ground, and when they have become so large as to be in the way, they are then cut off to the great detriment of the tree, the bark not growing over to heal the wound, and leaving a pretty sure chance of rot and decay; when, if trimmed the second year from the graft, and so on, year by year, until the tree is perfectly formed, a smooth thrifty stock shows itself, to reward the cultivator, instead of a rough, rotten and unthrifty snarl. I passed this last summer, what might have been a beautiful orchard, had proper pains been taken with it in its younger days. The trees apparently were about twenty years old, and the owner had let them go until this year without pruning, and now had cut off about a third of each tree, leaving the stumps of the branches sticking out from two to four inches, as a mark of his taste and sign of his ignorance. I, however, am not writing without some experience myself, which is diametrically opposite to that of Mr Watkins. I have about thirty pear trees in my garden which have been there from five to forty years, and I have no recollection of seeing a blight but in four. The whole have been served alike, manured, digged round and pruned to my heart's content, and a thriftier set of trees cannot be found in the country. The four trees which have blighted, were the Brown Beurre, the St Michael's, the Winter Thorn and one other, not known. All but the Winter Thorn are in the garden, that is in the yard; four years since part of the tree was grafted with the Seckle and Bartlet, which did well without blight, while the rest of the tree was blighted: this past season the whole top has been cut off and grafted with other fruit, and the grafts are doing well without blight, about sixty grafts have been put in. The tree dug round and manured, a considerable quantity of soap suds poured round it, and not a particle of blight yet to be seen. For years before the tree was not manured or digged round, and to make the case more singular, the ground had been trodden during a number of summers by a cow. This tree is over thirty years old. I have long since made up my mind that some kind of pears are more liable to blight than others, but I am afraid that the true cause of blight is not found out and will not be for years to come, if ever. Two of the other pears mentioned have been grafted, one of which has

Norfolk, where the turneps were first introduced, was astonishing; lands long considered as utterly worthless, were in a few years covered with heavy wheat, and the present annual value of the turnep in that country alone is estimated at not less than fifteen millions sterling, or more than sixty millions of dollars.—*Genesee Farmer.*

Art. VIII.—*Blight in Pear Trees.*

Messrs Editors,—In your last Register I observed an article copied from the "Farmers' Register," referring to the blight in pear trees. Any one that can discover a remedy for that troublesome disease will deserve the thanks of the whole horticultural world, and the suggestions of any one are entitled to a fair trial. My experience, however, leads me to differ from the conclusions drawn by Mr Watkins, although I do not doubt the facts he has stated.

In the first place, he concludes, from the fact, that two trees standing in his yard, which had never been cultivated, not having been blighted, and that some young trees, having been set out in a cultivated spot were blighted, that cultivation by increasing the sap, causes the blight; and in the second place, that pruning trees has the same effect.

It appears, however, that the yard in which the trees stood was trodden by horses and cattle, and therefore, at least as much if not more manure, reached the roots, as would have done so, had the ground been ploughed or digged. It is too late in the day for any one to oppose cultivation with effect in this country, neither does Mr Watkins. (In the latter part of his communication he recommends that poor land should be made better even at the risk of blight;) but there are many, too many persons in this country who are satisfied with old fashions, and as long as they can raise as much as they want off of ten acres of land, will never try to get the same quantity from five, and feel perfectly satisfied with, and indeed, insist that better cider can be made from the sour natural fruit of the tree, than from the grafted and cultivated. With such men it is no use to argue; but they have children to come after them, and it is the rising generation who will be enlightened.

I insist, that not one half pruning enough is done in this country, and that thousands of trees are ruined by not being pruned properly when young. In many instances the limbs are left too near the ground, and when they have become so large as to be in the way, they are then cut off to the great detriment of the tree, the bark not growing over to heal the wound, and leaving a pretty sure chance of rot and decay; when, if trimmed the second year from the graft, and so on, year by year, until the tree is perfectly formed, a smooth thrifty stock shows itself, to reward the cultivator, instead of a rough, rotten and unthrifty snarl. I passed this last summer, what might have been a beautiful orchard, had proper pains been taken with it in its younger days. The trees apparently were about twenty years old, and the owner had let them go until this year without pruning, and now had cut off about a third of each tree, leaving the stumps of the branches sticking out from two to four inches, as a mark of his taste and sign of his ignorance. I, however, am not writing without some experience myself, which is diametrically opposite to that of Mr Watkins. I have about thirty pear trees in my garden which have been there from five to forty years, and I have no recollection of seeing a blight but in four. The whole have been served alike, manured, digged round and pruned to my heart's content, and a thriftier set of trees cannot be found in the country. The four trees which have blighted, were the Brown Beurre, the St Michael's, the Winter Thorn and one other, not known. All but the Winter Thorn are in the garden, that is in the yard; four years since part of the tree was grafted with the Seckle and Bartlet, which did well without blight, while the rest of the tree was blighted: this past season the whole top has been cut off and grafted with other fruit, and the grafts are doing well without blight, about sixty grafts have been put in. The tree dug round and manured, a considerable quantity of soap suds poured round it, and not a particle of blight yet to be seen. For years before the tree was not manured or digged round, and to make the case more singular, the ground had been trodden during a number of summers by a cow. This tree is over thirty years old. I have long since made up my mind that some kind of pears are more liable to blight than others, but I am afraid that the true cause of blight is not found out and will not be for years to come, if ever. Two of the other pears mentioned have been grafted, one of which has

never shown blight except *in one limb*, for the last four years, and that one limb was killed in one night this last spring, I think by lightning. The remaining pear tree is about seven years old, was purchased for a Heathcote, never bore until this year, does not prove to be the pear, has only two miserable cracked abortions on it and I do not know what it is, the stock, however, is a fine one and will be grafted next year.

I do not think Mr Watkins has proved any thing except the fact, that pear trees planted in a yard trodden by horses and calves may do well, and as it is not every one that has sufficient horses and calves to tread round all his trees, or if he had, would like to have them inmates of his garden, I trust no one will carry his experiment so far as to leave his grounds in an unseemly condition, or to cease pruning when young, so that he may form trees handsome as well as thrifty. Solomon's proverb, I think, will apply to trees as well as children, "Train up a tree in the way it should grow, and when it is old it will not depart from it."

NUMA.

Art. IX. — *Massachusetts Horticultural Society.*

To give a detailed account of the proceedings and exhibitions of the Horticultural Society, for the month of August, we should not do justice to our distant patrons and friends, who, it may be supposed, cannot take great interest in such details, nor can it be very interesting to those in our own immediate vicinity.

It is gratifying to observe the interest that has been exhibited by the members of the society, and its friends. We have cause of gratitude for the rich variety of luxury and beauty with which our tables and stands have been crowned during the month of August.

It argues well for the progress of horticulture. Amid the prostration of almost every branch of industry, it is pleasant to witness the success which has attended the efforts of the gardener and husbandman. We are now assured of a plentiful harvest of the substantials of life, and an abundance of the numerous varieties of fruits which are congenial to our climate, with the exception of peaches: of this delicious fruit, we must for the present be deprived, or pay

an enormous price; for the greater part of our trees have been destroyed by the severity of our winters, and those alone are in bearing this year, which had the protection of glass.

Among the numerous flowers exhibited, the dahlia has been the most prominent. We have never seen finer specimens than some of those shown: the cold weather has been peculiarly favorable for their perfection. We shall defer giving descriptions of any until after the annual exhibition. We shall be able, then, we trust, to give the names of the greatest number of the finest dahlias ever exhibited in our country. We shall not be ashamed to show with any other society in the United States. The annual exhibition will take place on the 20th inst., in the new hall over 23 Tremont Street.

This hall has been rented by the Society for eighteen months, and will give ample accommodations for the annual as well as weekly exhibitions.

Friends of the Society, although not members, are requested to forward to the hall, on the 19th, fruits and flowers which they would like to have exhibited. J. B.

Art. X.—*Miscellaneous Articles.*

To Destroy Insects. — There is nothing that protects young crops of turnips, cabbages, and other small plants, from the depredations of the fly, so well as rolling; for when the surface is rendered completely smooth, these insects are deprived of the harbor they would otherwise have under the clods and small lumps of earth. This method will be found more effectual than soaking the seed in any preparation, or dusting the plants with any composition whatever; but as the roller must only be used previous to, or at the time of sowing the seed, and not even then if the ground be wet, it is necessary that the gardener should have a hogshead always at hand in dry weather, containing infusions made of waste tobacco, lime, soot, cow dung, elder, burdock leaves, &c. A portion of these ingredients, or any other preparation that is pernicious or poisonous to insects, without injuring the plants, thrown into a hogshead kept filled up with water, if used moderately over beds of young plants

in dry weather, would, in almost every case, insure a successful crop.

As liquid, however, cannot be conveniently used on a large piece of land, it may be necessary, if insects are numerous, to sow tobacco dust mixed with road dust, soot, ashes, lime, or the dust of charcoal, in the proportion of half a bushel per acre, every morning until the plants are free or secure from their attacks. Turnip seed will sometimes sprout in fortyeight hours. Cabbage seed ought to come up within a week after it is sown; but it sometimes happens that the whole is destroyed before a plant is seen above ground; the seedsman, in this case, is often blamed without a cause. A correspondent has communicated the result of an experiment for preventing the attacks of flies or fleas, on turnips. He says, "steep your seeds in a pint of warm water for two hours, in which is infused one ounce of saltpetre; then dry the seed, and add currier's oil sufficient to wet the whole; after which mix it with plaster of Paris, so as to separate and render it fit for sowing."

In the summer season, brocoli, cabbage, cauliflower, &c., are particularly subject to the ravages of grubs and caterpillars; to prevent this wholly, is perhaps impossible, but it is not difficult to check these troublesome visitors; this may be done, by searching for them on their first appearance, and destroying them. Early in the morning, grubs may be collected from the earth, within two or three inches of such plants as they may have attacked the night previous. The approach of caterpillars is discóverable on the leaves of cabbages, many of which are reduced to a thin white skin, by the minute insects which emerge from the eggs placed on them; these leaves being gathered and thrown into the fire, a whole host of enemies may be destroyed at once; whereas, if they are suffered to remain, they will increase so rapidly, that in a few days the plantation, however extensive, may become infested; now, when once these arrive at the butterfly or moth stage of existence, they become capable of perpetuating their destructive race to an almost unlimited extent. The same remarks apply to all other insects in a torpid state. Worms, maggots, snails or slugs, may be driven away by sowing salt or lime in the spring, in the proportion of two or three bushels per acre, or by watering the soil occasionally with salt and water to the quantity of about two pounds of salt to four gallons of water; or the slug kind may be easily entrapped on small

beds of plants, by strewing slices of turnip on them late in the evening; the snails or slugs will readily crowd on them, and may be gathered up early in the morning (before sunrise) and destroyed.—*Bridgman's Gardener's Assistant.*

Root Culture.—The root, and particularly the turnip culture, which has been extolled as the basis of improved husbandry in Great Britain, is rapidly extending among us: and we confidently anticipate from it the best practical results. Five years ago there was not probably two hundred pounds of ruta baga seed sown in the state; this year tons of this seed have been sown; and the culture of mangold wurtzel and carrots, has been also greatly extended. One seedsman has imported twentysix hundred weight of ruta baga seed, and this probably is not more than a quarter, or a third that has been sown. The supply has become exhausted, from Baltimore to Boston, and yet the demand has not been supplied. Our neighbor, Thorburn has sold this season 1,500 pounds ruta baga seed; 150 pounds carrot do.; 100 pounds parsnip do.; and 150 pounds mangold wurtzel do.; and, as indicating the extended culture of roots, and the advance of agricultural improvement, we add, that he has retailed seventy cultivators; eighty drill-barrows; and seventyfive of Green's straw-cutters. We record these facts as affording, in our mind, substantial proofs of a propitious change, and of the efforts to improve, which are now being manifested in our agricultural community. And from the spirit of inquiry which is abroad, and the general circulation of agricultural periodicals, we hazard little in saying, that the rising generation will be better farmers, and more enlightened men, than their fathers have been. Let every young farmer ponder upon these facts, and to stimulate him to honorable exertion, let him remember, that he who aims to excel, will at least attain mediocrity; while he who aims at mediocrity will generally fall short of it. Cultivate the mind, as the sure means of increasing the profits of the hands.—*Albany Cult.*

Mangel Wurzel.—Manzel Wurzel is a kind of red beet, not liable to be injured by disease or insects, and proof against the change of seasons. It requires loamy loose soil, and abundance of short and rich manure. It gives no unpleasant taste to milk or butter, (an objection which may be urged against turnips and most

kinds of cabbage)—quite the reverse. Pigs, as well as milch cows, are fond both of its leaves and roots. Sixteen or twenty perches under it, will support a cow, allowing her sixty pounds weight per day, for the five winter months; and half a pound of seed, which will cost about 1s. 6d., will sow these twenty perches. From the 20th to the end of April, is the best time for sowing the seed; and those of you who are not likely to have your ground at that time ready, should sow in a seedling bed, in order to transplant when the ground is prepared; and in this case you should not put out the plants until they are about an inch in diameter, else they will not arrive at full size. The best way, however, is to sow the seed where it is to remain, and the process is as follows:—

Prepare your land as if for drilling potatoes—open the drills eighteen inches or two feet distant, the deeper the better, unless there is yellow clay at the bottom—fill them with short manure—cover them with four or five inches of earth—roll them lengthways, and then on the smooth and level top make holes with a dibbling stick, two inches in depth and about twelve inches apart, and into every hole drop two seeds, which are to be covered as the work proceeds. When the plants are about two inches high, you are to draw out from each hole the extra plant or plants, leaving, of course, the strongest and healthiest plant behind. Keep them clear from weeds, but do not earth them. If any of the plants appear to run to seed, pull them out, and transplant into their room, after stirring up the earth, and applying a little fresh manure, (and to the want of attention to this point the comparative failure of transplanted crops is to be attributed) other plants of mangel wurzel, rape, cabbages, or Swedish turnips, which should always be in a reserved seedling bed, in case of failure in any crop. In September pull the leaves—[cutting them close to the crown will cause the root to rot if left in the field during the winter]—and give them to your cows, sheep, and pigs. You will also find that they make a good substitute for greens or spinach.—*Martin Doyle.*

At Hohenheim, an experiment has been made, the last summer, to ascertain, comparatively, the best plan to be pursued with the cultivation of mangel wurzel—whether it was more profitable to pluck off the leaves, about a month previous to the clearing the roots from the ground, or allowing them to retain their leafy honors, until the period of their being taken up; and the following is the result

of the two equal portions of a field, on which the systems were tried :—On the 11th Oct., by leaves, 756 lbs.; 5th Nov., do., at the time of securing the roots, 272; ditto, weight of roots, 4,272—total, 5,500 lbs. The other portion of the field yielded, at the time of securing the roots—5th Nov., by leaves, 894 lbs.; ditto, weight of roots, 4,948—total, 5,842 lbs. On that moiety of the field where the roots had been untouched, there was a diminution in the produce of leaves, of 134 lbs., but an increase of 476 lbs. in the roots; and, even supposing that the leaves have equally nutritious properties with that of the roots, yet, there is a superiority in favor of the system of permitting the root to come to maturity, before depriving it of leaves, of 342 lbs., or about six per cent.—*Mark Lane Express.*

Mildew of Grapes — A gentleman of this village, who takes much interest in these things, informs us that he has discovered a *sure* remedy for mildew upon grapes. The mildew has been the great bane to the success of growing the more tender but delicious kinds of grapes in this quarter, and even the much praised Isabella suffers more or less by it. The gentleman above mentioned, says that he last year discovered that his grapes began to mildew badly, that he had formerly tried sulphur and other remedies without success, and that he made the experiment of applying strong *soap suds* with a syringe to a few bunches, and these came to maturity plump, smooth and fair, while all the rest upon the same vine were so badly mildewed as to be unfit for use. Should this simple remedy prove effectual, our courage will again be revived in cultivating this delicious table fruit. — *Fredonia Censor.*

Salubrious qualities of the Strawberry.—Every friend to the fair will be glad to diffuse the knowledge of a pleasant dentifirce, and infallible sweetner of the breath. The common strawberry in a ripe state, when rubbed upon the teeth and gums, has these most agreeable influences, and becomes more efficacious if eaten freely. The celebrated Linnæus cured himself of gout by persevering in a regimen of strawberries.

Horticultural exhibition at Ghent. — At the recent show there were 6000 plants exhibited from different parts of Europe — valued at $200,000. M. Rose-en-dael (a flowery name) gave $2500 for a camelia! There were 322 guests at the sumptuous banquet.

QUINCY MARKET.

[Reported for the Horticultural Register.]

APPLES,	peck	25	50
APRICOTS,	doz.	50	
BEETS,	bunch	6	
BEANS, String,	peck	20	
Shell,	quart	10	12
CABBAGES,	dozen	37	50
CAULIFLOWERS,	a piece	12	25
CARROTS,	bunch	6	
CELERY,	root	6	
CUCUMBERS,	dozen	6	
(Pickles)	hundred	12	17
CURRANTS,	quart	6	8
CORN, (Green)	dozen	12	
GRAPES,	pound	75	1 00
LEMONS,	box	3 00	
LIMES, (pickled)	gallon	37	
MELONS, (Musk)	each	12	25
(Water)	do.	25	75
NUTS, Almonds, (Soft shelled)	pound	7	8
(Hard)	do	4	5
Filberts	do.	3	4
English Walnuts	do.	5	7
Castana,	do.	4	5
Pea Nuts,	bushel	1 25	
ORANGES,	box	3 00	
ONIONS,	bushel	1 25	1 50
POTATOES,	do.	40	50
PEAS,	peck	20	25
PEARS,	do.	25	50
PEPPERS,	pound	3	
PLUMS,	quart	17	25
PEACHES,	dozen	25	75
SWEET POTATOES,	peck	75	
SQUASHES, Summer	dozen	12	
Winter	pound	4	
TURNIPS,	bushel	75	1 00
TOMATOES,	dozen	12	

Vegetables continue cheap and plenty. Potatoes have been sold by the quantity for thirtyseven and a half or less per bushel. Sweet Potatoes have been in market about a week. Apples, Pears, and Plums of numerous sorts in great abundance. A few Peaches are to be found of an inferior quality from open ground; a few fine ones are occasionally in market from the green houses at extravagant prices from 1 dollar to 3 dollars per dozen. Whortleberries have been unusually poor and price high.

Boston, August 29, 1837.